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Fabio R. Maino

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EXAMINER

TESLOVICH, TAMARA

ART UNIT

PAPER NUMBER

2137

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,367

Applicant(s)

MAINO ET AL.

Examiner

Tamara Teslovich

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This action is in response to the Applicant's Pre-Appeal Brief Request for Review filed July 6, 2006.

Claims 26-50 are pending and herein considered.

Response to Arguments

Applicant's arguments filed July 6, 2006 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 26, 36, 48 and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,922,785 B1 to Brewer et al.

As per **claim 26**, Brewer teaches a method for processing frames in a fibre channel network having a first network entity and a second network entity (col:5 lines 1-8), the method comprising: receiving a frame at a first network entity from the second network entity in a fibre channel network (col.2 lines 1-5); identifying a security control

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indicator in the frame from the second network entity (col.2 lines 1-5); determining that a security association identifier associated with the frame corresponds to an entry in a security database (in Network Interface Card) (col.2 lines 1-5); decrypting the first portion of the frame by using algorithm information contained in the entry in the security database (col.2 lines 1-5).

As per **claim 36**, Brewer teaches a method for transmitting encrypted frames in a fibre channel network having a first network entity and a second network entity, the method comprising: identifying a fibre channel frame having a source corresponding to the first network entity and a destination corresponding to the second network entity (col.5 lines 1-8); determining if the fibre channel frame corresponds to the selectors of an entry in a security database; encrypting a first portion of the fibre channel frame using key and algorithm information associated with the entry in the security database (col.4 lines 49-63); providing a security control indicator in the fibre channel frame, wherein the security control indicator specifies that the fibre channel frame is encrypted (col.2 lines 1-5); transmitting the fibre channel frame to the second network entity (col.1 lines 59-67).

Claim 48 corresponds to an apparatus employing the method described in claim 36 and is rejected accordingly.

As per **claim 50**, Brewer teaches an apparatus for receiving encrypted frames in a fibre channel network having a first network entity and a second network entity (col.5 lines 1-8), the apparatus comprising: means for identifying that the frame has been secured (col.2 lines 1-5); means to lookup the security parameters in a security

database that allow the de-encapsulation of the frame (col.2 lines 1-5); means to decrypt the eventually encrypted frame (col.2 lines 1-5); means to verify that the message has been sent by the sender, and that has not been tampered with during its transmission (col.1 lines 59-67)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 27-35, 37-47 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,922,785 B1 to Brewer et al. as applied to claims 26, 36, and 50 above and further in view of US Patent No. 6,973,568 B2 to Hagerman.

As per **claim 27**, Brewer teaches the method of claim 26 but fails to teach wherein the entry in the security database was created after a fibre channel network authentication sequence between the first and second network entities.

Hagerman teaches wherein the entry in the security database was created after a fibre channel network authentication sequence between the first and second network entities (col.7 lines 1-10).

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within Brewer's method the fibre channel network authentication sequence as described in Hagerman to provide additional security.

As per **claim 28**, Hagerman teaches wherein the first portion is decrypted using a key contained in the entry in the security database (col.3 lines 43-53).

As per **claim 29**, Hagerman teaches wherein the first portion is encrypted using DES, 3DES or AES (col.7 lines 1-10).

As per **claim 30**, Hagerman teaches recognizing that a second portion of the frame supports authentication; using algorithm information contained in the entry in the security database to authenticate the second portion of the frame (col.5 lines 15-41).

As per **claim 31**, Hagerman teaches wherein the second portion is authenticated using MD5 or SHA1 (col.3 lines 34-42; col.7 lines 35-44).

As per **claim 32**, Hagerman teaches wherein the authentication sequence is a fibre channel login sequence between the first and second network entities (col.3 lines 34-47).

As per **claim 33**, Hagerman teaches wherein the login sequence is a PLOGI or FLOGI sequence (col.6 lines 6-13).

As per **claim 34**, Hagerman teaches wherein the first and second network entities are domain controllers and the authentication sequence is a FC-CT sequence (col.1 lines 28-40).

As per **claim 35**, Hagerman teaches wherein the first and second network entities are domain controllers and the authentication sequence is a SW-TL sequence (col.6 lines 6-14).

As per **claim 37**, Brewer teaches the method of claim 36 but fails to teach wherein the entry in the security database was created after a fibre channel network authentication sequence between the first and second network entities.

Hagerman teaches wherein the entry in the security database was created after a fibre channel network authentication sequence between the first and second network entities (col.7 lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within Brewer's method the fibre channel network authentication sequence as described in Hagerman to provide additional security.

As per **claim 38**, Brewer teaches the method of claim 36 but fails to teach wherein the payload is encapsulated using the Authentication Header protocol or the Encapsulating Security Payload protocol.

Hagerman teaches wherein the payload is encapsulated using the Authentication Header protocol or the Encapsulating Security Payload protocol (col.7 lines 1-10).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within Brewer's method encapsulation using the Authentication Header protocol or the Encapsulating Security Payload protocol as described in Hagerman to provide additional security.

As per **claim 39**, Hagerman teaches adding security information to the header of the fibre channel frame (col.3 lines 23-33).

As per **claim 40**, Hagerman teaches wherein a first portion of the fibre channel frame is encrypted using DES, 3DES, or AES (col.7 lines 1-10).

As per **claim 41**, Hagerman teaches wherein parameters in the header are normalized prior to encrypting the first portion of the fibre channel frame (col.3 lines 48-53).

As per **claim 42**, Hagerman teaches wherein the payload is padded prior to encrypting the first portion of the fibre channel frame (col.5 lines 3-25).

As per **claim 43**, Hagerman teaches computing authentication data using key and algorithm information as well as a second portion of the fibre channel frame (col.5 lines 15-25).

As per **claim 44**, Hagerman teaches wherein authentication data is computed using MD5 or SHA1 (col.3 lines 34-42; col.7 lines 35-44).

As per **claim 45**, Hagerman teaches wherein the authentication sequence is a fibre channel login sequence between the first and second network entities (col.3 lines 34-47).

As per **claim 46**, Hagerman teaches wherein the login sequence is a PLOGI or FLOGI sequence (col.6 lines 6-13).

As per **claim 47**, Hagerman teaches wherein the first and second network entities are domain controllers and the authentication sequence is a FC-CT sequence or an SW-ILS message (col.1 lines 28-40; col.6 lines 6-14).

Claims 49 corresponds to an apparatus employing the method described in claim 37 and is rejected accordingly.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamara Teslovich whose telephone number is (571) 272-4241. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



T. Teslovich



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